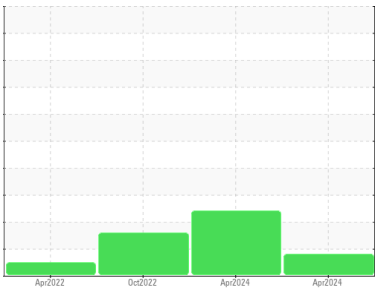
OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Area
HOWARD SHEPPARD
Machine Id
2563 HOWARD SHEPPARD
Component
Front Differential
Fluid
{not provided} (--- GAL)

DIAGNOSIS

Recommendation
No corrective action is recommended at this time. We recommend an early resample to monitor this condition.

Wear
Gear wear is indicated.

Contamination
There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

Fluid Condition
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0934569**	WC0934577	WC0771233
Sample Date		Client Info		**14 Apr 2024**	12 Apr 2024	15 Oct 2022
Machine Age	mls	Client Info		**189581**	189671	38877
Oil Age	mls	Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**ABNORMAL**	ABNORMAL	ABNORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>500	▲ **846**	▲ 791	319
Chromium	ppm	ASTM D5185m	>10	**5**	5	2
Nickel	ppm	ASTM D5185m	>10	**1**	1	0
Titanium	ppm	ASTM D5185m		**<1**	<1	0
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>25	**10**	9	3
Lead	ppm	ASTM D5185m	>25	**<1**	<1	0
Copper	ppm	ASTM D5185m	>100	**3**	3	1
Tin	ppm	ASTM D5185m	>10	**0**	0	0
Vanadium	ppm	ASTM D5185m		**<1**	0	0
Cadmium	ppm	ASTM D5185m		**<1**	<1	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**109**	100	109
Barium	ppm	ASTM D5185m		**2**	2	0
Molybdenum	ppm	ASTM D5185m		**<1**	<1	<1
Manganese	ppm	ASTM D5185m		**21**	19	11
Magnesium	ppm	ASTM D5185m		**168**	150	148
Calcium	ppm	ASTM D5185m		**4**	2	2
Phosphorus	ppm	ASTM D5185m		**1662**	1597	1540
Zinc	ppm	ASTM D5185m		**16**	13	4
Sulfur	ppm	ASTM D5185m		**23807**	24011	26361

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>75	**43**	41	14
Sodium	ppm	ASTM D5185m		**7**	6	4
Potassium	ppm	ASTM D5185m	>20	**2**	2	0
Water	%	ASTM D6304	>.2	**0.141**	0.010	0.035
ppm Water	ppm	ASTM D6304	>2000	**1410**	102	358.0

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>20000	**5664**	▲ 206090	▲ 195904
Particles >6µm		ASTM D7647	>5000	**3085**	▲ 148045	▲ 122816
Particles >14µm		ASTM D7647	>640	**525**	▲ 2596	▲ 1713
Particles >21µm		ASTM D7647	>160	**177**	29	54
Particles >38µm		ASTM D7647	>40	**27**	1	2
Particles >71µm		ASTM D7647	>10	**3**	0	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	**20/19/16**	▲ 25/24/19	▲ 25/24/18

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**0.80**	0.90	0.76

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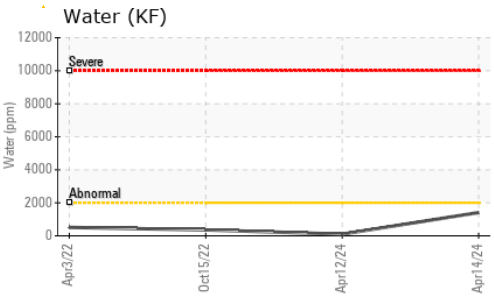
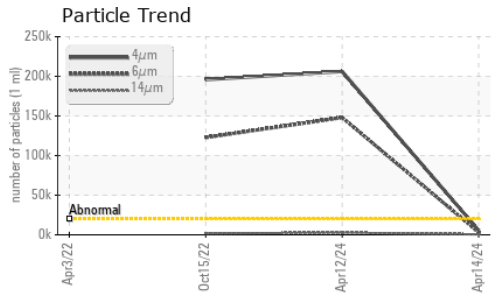
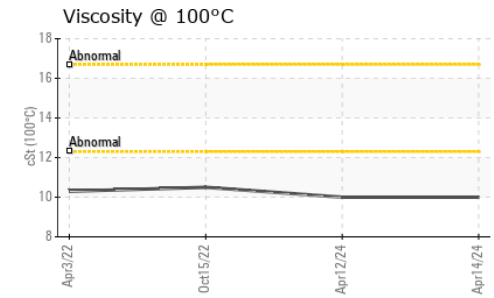
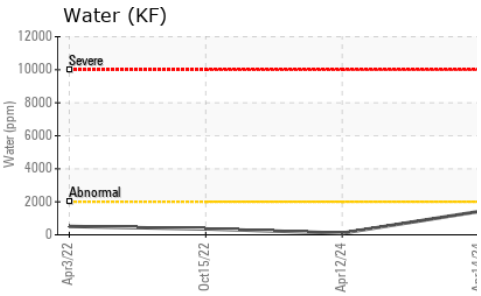
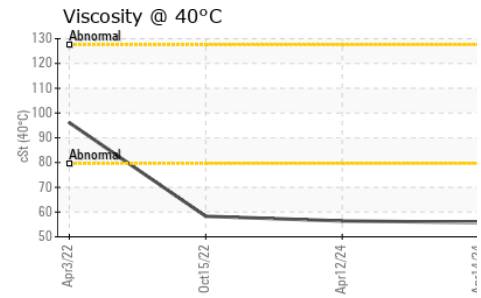








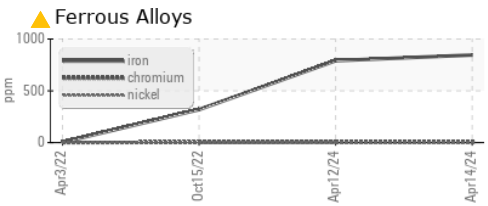


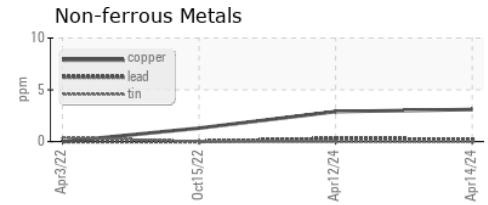
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	LIGHT
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>.2	**0.2%**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

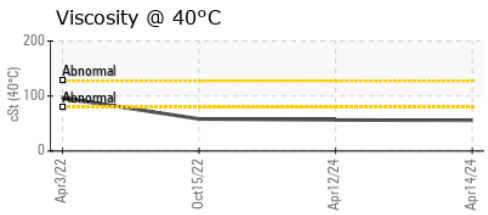
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445		**55.8**	56.4	58.3
Visc @ 100°C	cSt	ASTM D445		**10.0**	10.0	10.5
Viscosity Index (VI)	Scale	ASTM D2270		**167**	165	171

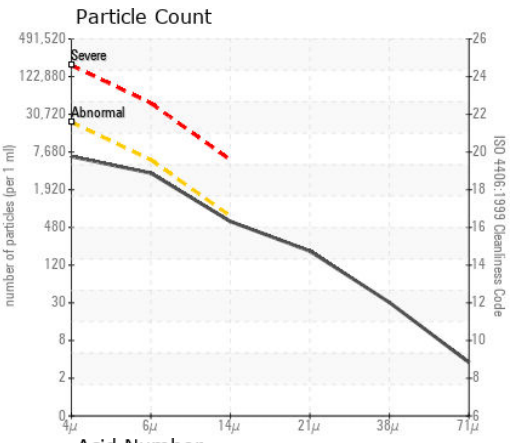
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

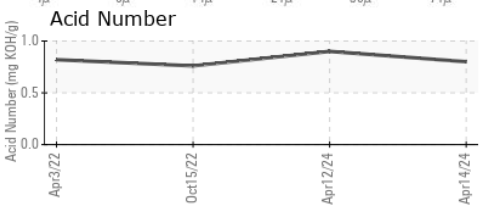
GRAPHS











Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0934569 **Received** : 06 Jun 2024
Lab Number : 06201492 **Tested** : 13 Jun 2024
Unique Number : 11063615 **Diagnosed** : 17 Jun 2024 - Doug Bogart
Test Package : MOB 2 (Additional Tests: KF, KV100, PrtCount, VI)

Certificate L2367

To discuss this sample report, contact Customer Service at 1-800-237-1369.
** - Denotes test methods that are outside of the ISO 17025 scope of accreditation.*
Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

BASF - GIANNA CREDAROLI
500 WHITE PLAINS RD
TARRYTOWN, NY
US 10591
Contact: MIKE BARRY
mike.barry@basf.com
T:
F: